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SESSION RESUMED IN FILE 'HCAPLUS' AT 21:00:24 ON 10 SEP 2010

FILE 'HCAPLUS' ENTERED AT 21:00:24 ON 10 SEP 2010

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CA SUBSCRIBER PRICE	-5.10	-5.10

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FILE 'HCAPLUS' ENTERED AT 21:00:31 ON 10 SEP 2010

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FILE COVERS 1907 - 10 Sep 2010 VOL 153 ISS 12

FILE LAST UPDATED: 9 Sep 2010 (20100909/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2010

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2010

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2010.

Updated Search

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s sandmeyer () reaction? and copper?  
1828 SANDMEYER  
3 SANDMEYERS  
1829 SANDMEYER  
(SANDMEYER OR SANDMEYERS)  
4722051 REACTION?  
1249 SANDMEYER (W) REACTION?  
1123055 COPPER?  
L11 97 SANDMEYER (W) REACTION? AND COPPER?

=> s copper () II  
1120963 COPPER  
544 COPPERS  
1121038 COPPER  
(COPPER OR COPPERS)  
2383058 II  
1255 IIS  
2383799 II  
(II OR IIS)  
L12 52536 COPPER (W) II

=> s l12 and sandmeyer () reaction?  
1828 SANDMEYER  
3 SANDMEYERS  
1829 SANDMEYER  
(SANDMEYER OR SANDMEYERS)  
4722051 REACTION?  
1249 SANDMEYER (W) REACTION?  
L13 9 L12 AND SANDMEYER (W) REACTION?

=> s l13 and review/dt  
2416647 REVIEW/DT  
L14 0 L13 AND REVIEW/DT

=> d l13, ibib abs, 1-9  
THE ESTIMATED COST FOR THIS REQUEST IS 27.90 U.S. DOLLARS  
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L13 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2009:1149701 HCAPLUS  
DOCUMENT NUMBER: 151:448008  
TITLE: Chelation-Assisted Palladium-Catalyzed Direct  
Cyanation of 2-Arylpyridine C-H Bonds  
AUTHOR(S): Jia, Xiaofei; Yang, Dongpeng; Zhang, Shouhui; Cheng,  
Jiang  
CORPORATE SOURCE: College of Chemistry and Materials Engineering,  
Wenzhou University, Wenzhou, 325027, Peop. Rep. China  
SOURCE: Organic Letters (2009), 11(20), 4716-4719  
CODEN: ORLEF7; ISSN: 1523-7060

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PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 151:448008

AB A chelation-assisted palladium-catalyzed ortho-cyanation of the sp<sup>2</sup> C-H bond of arylpyridine derivs. by CuCN provided aromatic nitriles in moderate to good yields. Notably, the reaction could be conducted on a 10 mmol scale. The key intermediate of a natural product of *Menispermum dauricum* DC was concisely synthesized by the described procedure. This new approach represents an exceedingly practical method for the synthesis of aromatic nitriles and offers an attractive alternative to the traditional Sandmeyer reaction.

OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)  
REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2008:383494 HCAPLUS  
DOCUMENT NUMBER: 148:552026  
TITLE: Synthesis of dioxin-like monofluorinated PCBs: for the use as internal standards for PCB analysis  
AUTHOR(S): Sott, Richard; Hawner, Christine; Johansen, Jon E.  
CORPORATE SOURCE: Chiron AS, Trondheim, N-7041, Norway  
SOURCE: Tetrahedron (2008), 64(18), 4135-4142  
CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 148:552026  
AB Monofluorinated polychlorinated biphenyls (fluoro-PCBs) were prepared using the Suzuki-coupling, for use as anal. stds. for PCB measurements. Seven of these fluoro-PCBs are analogs of the dioxin-like PCBs, listed by the WHO as the most toxic PCB congeners. Four highly chlorinated fluoro-PCBs were prepared by Suzuki-coupling of 2,3,5,6-tetrachloro-bromoaniline with various substituted arylboronic acids. The resulting amino-fluoro-PCBs are chlorinated using the Sandmeyer reaction or deaminated to yield tetra-, penta- and hexa-chlorinated fluoro-PCBs. The fluoro-PCBs elute just before the corresponding PCBs in the GC chromatogram, which strongly indicates their potential as anal. stds.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2004:625843 HCAPLUS  
DOCUMENT NUMBER: 141:157033  
TITLE: Process for the preparation of iodochromones, intermediates in the synthesis of fungicides, by condensation of nitriles with o-hydroxyaryl esters, cyclization, diazotization, decomposition of the diazonium salt, etherification and/or transesterification  
INVENTOR(S): Delamare, Madelaine; Casado, Michel  
PATENT ASSIGNEE(S): Bayer Cropscience S. A., Fr.

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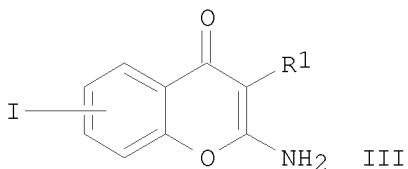
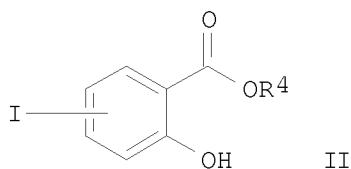
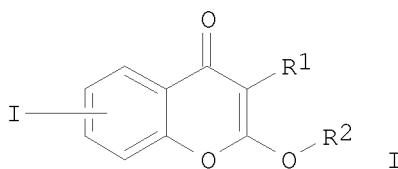
SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1443044	A1	20040804	EP 2003-356014	20030203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
WO 2004069821	A1	20040819	WO 2004-EP1786	20040128
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1592681	A1	20051109	EP 2004-705816	20040128
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2004006687	A	20051220	BR 2004-6687	20040128
CN 1745075	A	20060308	CN 2004-80003356	20040128
JP 2006516595	T	20060706	JP 2006-501930	20040128
IN 2005DN03345	A	20070420	IN 2005-DN3345	20050727
MX 2005008277	A	20050920	MX 2005-8277	20050803
US 20060111434	A1	20060525	US 2005-544294	20051017
PRIORITY APPLN. INFO.:			EP 2003-356014	A 20030203
			WO 2004-EP1786	W 20040128

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): CASREACT 141:157033; MARPAT 141:157033

GI



AB The invention is related to a process for the preparation of iodochromones (I), intermediates in the synthesis of fungicides, by condensation of nitriles R1CH<sub>2</sub>CN with o-hydroxyaryl esters (II), cyclization in aqueous acidic media, diazotization of the amine (III) with alkyl(thio)nitrites, or alkylthionitrates, or NaNO<sub>2</sub> in HCl, or H<sub>2</sub>SO<sub>4</sub>, Sandmeyer reaction of the in-situ formed diazonium salt in the presence of copper halides or Cu(OR<sub>3</sub>), followed by etherification with or transesterification with sodium alkoxides [R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = independently (un)substituted alk(en/yn)yl, carbocyclyl, heterocyclyl]. The advantages include high reaction yields, and conversions, use of cheap reagents, reduction in number of steps, and elimination of undesired steps and byproduct formation. For example, 2-butoxy-6-iodo-3-propylchromone (m.p. = 69-71°) was prepared by condensation of valeronitrile with 4-iodosalicylate in the presence of DIPA in THF/cyclization in the presence of NH<sub>4</sub>Cl, diazotization/Sandmeyer reaction in the presence of t-Bu nitrite/CuCl<sub>2</sub>/CH<sub>3</sub>CN, and etherification of the chlorochromone with sodium butylate in n-butanol.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 9 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2002:153725 HCAPLUS

DOCUMENT NUMBER: 137:124967

**TITLE:** Synthesis of fluorine containing polyfunctional aromatic compounds. Sandmeyer synthesis of 4-halo-3-trifluoromethylbenzonitriles

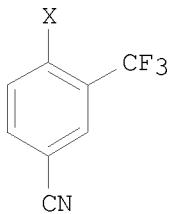
AUTHOR(S): Hino, Tetsuo; Namie, Tsutomu; Nakamura, Hiroyuki;  
Yonezawa, Noriyuki

CORPORATE SOURCE: Department of Organic and Polymer Materials Chemistry,  
Tokyo University of Agriculture and Technology,  
Koganei-cho 184-2588, Japan

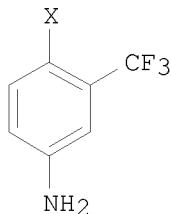
SOURCE: Koganei-shi, 184-8588, Japan  
Nippon Kagaku Kaishi (2002), (2), 219-222  
CODEN: NKAKB8; ISSN: 0369-4577

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PUBLISHER: Nippon Kagakkai  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese  
OTHER SOURCE(S): CASREACT 137:124967  
GI



I



II

AB An effective synthesis of a series of fluorine-containing polyfunctional aromatic compds., 4-halo-3-trifluoromethylbenzonitriles (I; X = Cl, Br, F) from 4-halo-3-trifluoromethylanilines (II; X = same as above) was performed by the use of some tetrahedral copper-cyano complexes as Sandmeyer cyanating reagents and sublimation in the isolation and purification process. In the conversion of the corresponding diazonium salts to the target benzonitrile derivs. I, three tetrahedral tetracyanocuppper complexes, K<sub>3</sub>[Cu(CN)<sub>4</sub>], Na<sub>3</sub>[Cu(CN)<sub>4</sub>], and K<sub>2</sub>[Cu(CN)<sub>4</sub>·NH<sub>3</sub>], proved to be effective as Sandmeyer cyanating reagents though copper(I) cyanide gave the target compds. I in moderate yields. Furthermore, the yields of nitriles I in the reaction with the copper(I) complexes were rather higher than that with the copper(II) complex, K<sub>2</sub>[Cu(CN)<sub>4</sub>·NH<sub>3</sub>]. The conversion reactions to nitriles I are suggested to proceed through an SNAr mechanism.

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L13 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1998:812206 HCAPLUS  
DOCUMENT NUMBER: 130:139155  
TITLE: Arenediazonium tetrachlorocuprates(II). Modification of the Meerwein and Sandmeyer reactions  
AUTHOR(S): Obushak, Mykola D.; Lyakhovych, Mykhaylo B.; Ganushchak, Mykola I.  
CORPORATE SOURCE: Department of Organic Chemistry, Lviv State University, Lvov, 290602, Ukraine  
SOURCE: Tetrahedron Letters (1998), 39(51), 9567-9570  
CODEN: TELEAY; ISSN: 0040-4039  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 130:139155  
AB In the Cu-catalyzed reactions of arenediazonium chlorides with unsatd. compds., arenediazonium tetrachlorocuprates(II) are formed as intermediates. A general method of preparation of these complexed diazonium salts is described. In polar solvents these salts undergo chlorinative

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dediazonation to give chloroarenes in high yield. The reaction of an arenediazonium tetrachlorocuprate(II) with an activated alkene results in the same products as the Meerwein reaction. A radical cation mechanism for this reaction is proposed.

OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)  
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1995:985193 HCAPLUS

DOCUMENT NUMBER: 124:175098

ORIGINAL REFERENCE NO.: 124:32463a,32466a

TITLE: Sandmeyer reactions. Part 3.

Estimation of absolute rate constants for the transfer of chloride ligands from CuII to 2-benzoylphenyl radical (Pschorr radical clock) and further investigations of the relative rates of transfer of chloride and water ligands to other substituted phenyl radicals

AUTHOR(S): Hanson, Peter; Hammond, Roger C.; Gilbert, Bruce C.; Timms, Allan W.

CORPORATE SOURCE: Dep. Chemistry, Univ. York, York, YO1 5DD, UK

SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1995), (12), 2195-202  
CODEN: JCPKBH; ISSN: 0300-9580

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Absolute rate consts. have been estimated for the transfer of chloride ligands from CuCl(OH<sub>2</sub>)<sup>5+</sup>, CuCl<sub>2</sub>(OH<sub>2</sub>)<sup>4</sup> and CuCl<sub>3</sub>(OH<sub>2</sub>)<sup>3-</sup> to 2-benzoylphenyl radical in aqueous solution at ionic strength 5 mol dm<sup>-3</sup> by comparison with its rate of cyclization. The radical reacts with the monochlorocuppper(II) complex with  $k = (8.8 \pm 1.3) + 106$  dm<sup>3</sup> mol<sup>-1</sup> s<sup>-1</sup>, but it does not discriminate between the di- and tri-chloro complexes,  $k = (1.0 \pm 0.15) + 108$  dm<sup>3</sup> mol<sup>-1</sup> s<sup>-1</sup>. Relative rate consts. for the transfer of chloride and water ligands to a series of 2-, 3- and 4-substituted Ph radicals have also been obtained; three copper complexes are implicated in chloride transfer for the conditions examined. Radicals with 3- and 4-substituents discriminate the monochlorocuppper(II) complex from the two more highly chlorinated complexes, the discrimination increasing the more nucleophilic and reactive the radical. Radicals with strongly electron-withdrawing 2-substituents (CN, F) do not discriminate between any of the chlorocuppper(II) complexes. A mechanistic rationale of the observations is proposed.

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L13 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1995:733290 HCAPLUS

DOCUMENT NUMBER: 123:111866

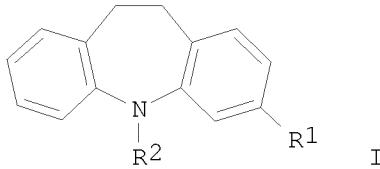
ORIGINAL REFERENCE NO.: 123:19988h,19989a

TITLE: New method for production 3-chloro-, 3-bromo-, and 3-iodo-10,11-dihydro-5H-dibenz[b,f]azepine derivatives involving one-step diazotization/Sandmeyer reaction of 5-acetyl-3-aminoiminodibenzyl

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INVENTOR(S): Hosztafi, Sandor; Galamb, Vilmos; Csende, Ferenc;  
Nagy, Janosne; Frank, Laszlo  
PATENT ASSIGNEE(S): Alkaloida Vegyeszeti Gyar Rt., Hung.  
SOURCE: Hung. Teljes, 9 pp.  
CODEN: HUXXBU  
DOCUMENT TYPE: Patent  
LANGUAGE: Hungarian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 67041	A2	19950130	HU 1992-3980	19921216
			HU 1992-3980	19921216
PRIORITY APPLN. INFO.:				
OTHER SOURCE(S):	CASREACT 123:111866; MARPAT 123:111866			
GI				



AB 10,11-Dihydro-5H-dibenz[b,f]azepine derivs. I (R1 = Cl, Br, I; R2 = H, acyl) are prepared by one-step diazotization/Sandmeyer reaction of 5-acetyl-3-aminoiminodibenzyl (I; R1 = NH2, R2 = Ac) with isopentyl nitrite and anhydrous CuCl2, CuBr2, or CuI. Thus, e.g., anhydrous CuCl2 was added to isopentyl nitrite in MeCN; then 3-amino-5-acetyliminodibenzyl was added so that the temperature did not exceed 30°; mixing for 2 h followed by workup afforded 70% 5-acetyl-3-chloroiminodibenzyl.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L13 ANSWER 8 OF 9 HCPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1991:558229 HCPLUS  
DOCUMENT NUMBER: 115:158229  
ORIGINAL REFERENCE NO.: 115:27079a,27082a  
TITLE: Sandmeyer reactions. Part 1. A comparative study of the transfer of halide and water ligands from complexes of copper(II) to aryl radicals  
AUTHOR(S): Hanson, Peter; Jones, Jason R.; Gilbert, Bruce C.; Timms, Allan W.  
CORPORATE SOURCE: Dep. Chem., Univ. York, Heslington/York, YO1 5DD, UK  
SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1991), (7), 1009-17  
CODEN: JCPKBH; ISSN: 0300-9580  
DOCUMENT TYPE: Journal

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LANGUAGE: English

AB Evidence was presented indicating that the homolytic formation of phenols under Sandmeyer conditions was directly comparable with the well-known halogenation reactions. Sandmeyer hydroxylation and halogenation are competitive processes; however, transfer of a halide ligand occurs more rapidly than that of a water ligand, and at high halide concns. phenol formation is minor, consistent with long known synthetic results. Relative rate data for ligand transfers to 4-substituted Ph radicals from complexes were given. LFER were examined using  $\sigma$ I and  $\sigma$ R.

OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L13 ANSWER 9 OF 9 HCPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1977:452884 HCPLUS

DOCUMENT NUMBER: 87:52884

ORIGINAL REFERENCE NO.: 87:8367a, 8370a

TITLE: Alkyl nitrite-metal halide deamination reactions. 2. Substitutive deamination of arylamines by alkyl nitrites and copper(II) halides. A direct and remarkably efficient conversion of arylamines to aryl halides

AUTHOR(S): Doyle, Michael P.; Siegfried, Bernard; Dellaria, Joseph F., Jr.

CORPORATE SOURCE: Dep. Chem., Hope Coll., Holland, MI, USA

SOURCE: Journal of Organic Chemistry (1977), 42(14), 2426-31  
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 87:52884

AB Arylamines (15) with 1 molar equivalent tert-BuONO and 0.5 molar equivalent CuCl<sub>2</sub> or CuBr<sub>2</sub> resulted in substitutive deamination to give the aryl chlorides or bromides. E.g., O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> and 1-aminonaphthalene with CuCl<sub>2</sub> and tert-BuONO in MeCN gave 99.5% p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>Cl and 82% 1-chloronaphthalene, resp. In the reactions using CuBr<sub>2</sub>, bromination at the o- or p-positions also occurred. The deamination-substitution procedure using Cu(II) halides was compared with that of the Sandmeyer reaction which uses Cu(I) halides.

OS.CITING REF COUNT: 102 THERE ARE 102 CAPLUS RECORDS THAT CITE THIS RECORD (103 CITINGS)

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